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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/085,820	05/28/98	WANG H	CIT98-01PA

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EXAMINER	
SHUKLA,R	
ART UNIT	**PAPER NUMBER**
1632	

DATE MAILED: 12/07/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/085,820	Wang et al
Examiner	**Group Art Unit**
Ram Shukla	1632

☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire _____one_____ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-66*

Of the above, claim(s) _____ is/are pending in the applicat

☐ Claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☐ Claim(s) _____ is/are rejected.

☒ Claims *1-66* is/are objected to.

_____ are subject to restriction or election requirement

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

1. Claims 1-66 are pending in the instant application.

Election/Restriction

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-21 and 41-43, drawn to an in vivo method of altering angiogenesis, classified in class 514, subclass 1.

II. Claims 8-21 and 39-40, drawn to a method of drug delivery, classified in class 424, subclass 278.1.

III. Claims 22-27, 33, and 64, drawn to transgenic mice expressing a reporter gene in their arterial endothelial cells and uses thereof, classified in class 800, subclass 8.

IV. Claims 28-32, 34, and 64, drawn to transgenic mice expressing a reporter gene in their veinous endothelial cells and uses thereof, classified in class 800, subclass 8.

V. Claims 35-36, 50-51, 54, 56, 58, and 60, drawn to arterial endothelial cells and methods of identifying such, classified in class 435, subclass 325.

VI. Claims 37-38, 52-53, 55, 57, 59, and 61, drawn to veinous endothelial cells and methods of identifying such, classified in class 435, subclass 325.

VII. Claims 44-49 , drawn to an in vitro method of drug screening, classified in class 514, subclass 4.

VIII. Claim 62, drawn to a cDNA library of arterial endothelial cells, classified in class 536, subclass 23.1.

IX. Claim 63, drawn to a cDNA library of veinous endothelial cells, classified in class 536, subclass 23.1.

X. Claim 65, drawn to a method of ex-vivo gene therapy using arterial endothelial cells, classified in class 424, subclass 93.1.

XI. Claim 66, drawn to a method of ex-vivo gene therapy using veinous endothelial cells, classified in class 424, subclass 93.1.

3. Claims 64 is generic to groups III and IV. Should any of groups III and IV be elected, claim 64 will be examined to the extent it encompasses the elected invention.

4. The inventions are distinct, each from the other because

The inventions of the groups I-II, VII and X -XI are patentably [redacted]g reasons: because they are drawn to different methods that would have different st[redacted]n from the other steps of the method of group I, that is drawn to an in vivo method of altering [redacted]xample, the wherein a drug disrupts the interaction between an artery specific cell surface mo[redacted]esis specific cell surface molecule in vivo, will be different from those of a method of screed vein drug, the invention of group VII, that disrupts the interactions between an arterial endothel[redacted]r a surface molecule and a vein endothelial cell surface molecule in vitro. Likewise the steps of these inventions would be different from those of an ex-vivo gene therapy (methods of groups X and XI) wherein cells are genetically modified in vitro and then administered to a mammal. The methods of groups X and XI, although both drawn to ex-vivo gene therapy, are patentably distinct from each other because they are drawn to therapy methods using different cells, viz. arterial endothelial cells and veinous endothelial cells, that express different surface molecules and that have been transfected with different nucleic acids. Therefore, the methods of the groups I, II, VII, X, and XI are patentably distinct each from the other and they will require separate searches, for example, in the non-patent literature.

The inventions of the groups III-VI and VIII-IX are patentably distinct each from the other because they are drawn to materially different compositions. The inventions of both, groups VIII and IX are drawn to cDNA libraries, however, they are patentably distinct each from the other because they are drawn to cDNA libraries of two different cell types that express different genes The inventions of the groups III and IV are drawn to transgenic mice that express different transgenes and therefore they are patentably distinct from each other. Further, the transgenic mice of the groups III and IV are also patentably distinct from the cDNA libraries of the groups VIII and IX because the cDNA libraries are nucleic acids and they can not be used to make the transgenic mice of groups III and IV. The inventions of the groups V and VI, drawn to isolated arterial endothelial cells and veinous endothelial cells respectively, are patentably distinct each from the other and from inventions of each of the groups III-IV and VIII-IX because compositions of arterial and veinous cells are different from each other as well as from cDNA libraries or transgenic animals. Therefore, the inventions of the groups III-VI and VIII-IX are patentably

distinct each from the other, and will require separate searches, for example, in the non-patent literature.

The inventions of each of the groups I-II, VII and X-XI are patentably distinct from the inventions of each of the groups III-VI and VIII-IX because the compositions of the groups III-VI and VIII-IX can not be used for practicing the methods of the groups I-II, VII, and X-XI. Conversely, the methods of the groups I-II, VII, and X-XI can not be used for making the compositions of the groups III-VI and VIII-IX. In conclusion, the inventions of the groups I-XI are patentably distinct each from the other and their analysis will require separate searches, for example, in the non-patent literature.

5. Because these inventions are distinct for the reasons given above, have acquired a separate status in the art shown by their recognized divergent subject matter, and because each invention requires a separate, non-coextensive search, restriction for examination purposes as indicated is proper.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram R. Shukla whose telephone number is (703) 305-1677. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jasemine Chambers, can be reached on (703) 308-2035. The fax phone number for this Group is (703) 308-8724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0196.

Ram R. Shukla, Ph.D.

Bruce Campbell

BRUCE R. CAMPELL
PRIMARY EXAMINER
GROUP 1800